

WE CLAIM AS OUR INVENTION:

1. A method for setting a focal spot position of an X-ray tube comprising the steps of:

providing an X-ray tube having a focal spot at a focal spot position; and
connecting a closed loop regulator to said X-ray tube and regulating said focal spot position as a controlled variable.

2. A method as claimed in claim 1 comprising emitting an electron beam directed at an anode, said electron beam striking said anode at said focal spot at said focal spot position; and

deflecting said electron beam in a propagation path between said cathode and said anode dependent on said closed loop regulation of said focal spot position.

3. An x-ray device comprising:

an X-ray tube having a focal spot at a focal spot position; and
a closed loop regulator connected to said X-ray tube for regulating said focal spot position, using said focal spot position as a controlled variable.

4. An X-ray device as claimed in claim 3 wherein said X-ray tube comprises a cathode that emits an electron beam, an anode that is struck by said electron beam at said focal spot at said focal spot position;

a deflector disposed to interact with said electron beam in a propagation path between said cathode and said anode to deflect said electron beam;

a measurement arrangement for measuring said focal spot position on said anode and generating a focal spot position signal dependent on said focal spot position; and

a deflector closed loop regulator unit connected to said deflector, to said measurement arrangement, and to said regulator for generating a control signal to operate said deflector to selectively deflect said electron beam dependent on said focal spot position.

5. An X-ray device as claimed in claim 4 wherein said measurement arrangement measures said focal spot position and generates said focal spot position signal without physically touching said X-ray tube.

6. An X-ray device as claimed in claim 5 wherein said measurement arrangement measures an actual location of said focal spot on said anode to generate said focal spot position signal.

7. An X-ray device as claimed in claim 4 wherein said measurement arrangement measures an intensity of X-rays emanating from said anode to generate said focal spot position signal.

8. An X-ray device as claimed in claim 7 wherein said X-ray beam proceeds along an optical path from said anode, said optical path having an edge, and wherein said measurement arrangement is disposed at said edge to interact with said X-ray beam and detect deviations of said X-ray beam from said optical path, as a measurement of said intensity, to generate said focal spot position signal.

9. An X-ray device as claimed in claim 4 wherein said measurement arrangement measures a temperature of said anode to generate said focal spot position signal.

10. An X-ray device as claimed in claim 9 wherein said measurement arrangement comprises an infrared camera for measuring said temperature.